

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's Rules	)	WT Docket No. 05-62
To Provide for Flexible Use of the 896-901 MHz	)	
and 935-940 MHz Band Allotted to the Business	)	
and Industrial Land Transportation Pool	)	
	)	
Improving Public Safety Communications in the	)	WT Docket No. 02-55
800 MHz Band	)	
	)	
Consolidating the 800 MHz and 900 MHz	)	
Industrial/Land Transportation and Business Pool	)	
Channels	)	

**REPORT AND ORDER**

**Adopted: October 9, 2008**

**Released: October 22, 2008**

By the Commission:

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**I. INTRODUCTION**

1. In this Report and Order, we retain the current site-based licensing paradigm for the 199 channels allocated to the Business and Industrial Land Transportation (B/ILT) Pool in the 896-901

MHz/935-940 MHz (900 MHz) band<sup>1</sup> and decline to adopt the geographic area/channel block licensing and competitive bidding rules proposed in the *Notice of Proposed Rulemaking* in WT Docket 05-62.<sup>2</sup> In addition, we define certain interference protection rights and obligations of all licensees operating in the 900 MHz B/ILT band. Finally, we announce that we will lift the freeze placed on applications for new 900 MHz B/ILT licenses in September 2004 on a rolling basis, tied to the completion of rebanding in each 800 MHz National Public Safety Planning Advisory Committee (NPSPAC) region.<sup>3</sup> In light of the record compiled in response to the *Notice*, our action today recognizes the important needs of 900 MHz B/ILT licensees for spectrum to expand or establish radio systems used by private wireless licensees, including many critical infrastructure industries, to provide services essential to the economic well-being and safety of our citizens and industries. We remain committed to the goal, as stated in the *Notice*,<sup>4</sup> of promoting flexible use of the electromagnetic radio spectrum, and our action today does not diminish our belief that flexible use in general remains the best policy for spectrum allocation. Nevertheless, we acknowledge the scarcity of frequencies dedicated solely to B/ILT licensees, and believe our action today will both help ensure the communications viability of incumbent and prospective 900 MHz B/ILT licensees, and provide for the orderly modification and growth of their communications systems.

## II. BACKGROUND

2. The Commission in 1986 established a pool structure for the 900 MHz private land mobile radio (PLMR) spectrum and allocated 10 MHz of spectrum in the 896-901 MHz and 935-940 MHz bands into different pools: 5 MHz (200 channels) for the Specialized Mobile Radio (SMR) Pool; 2.5 MHz for the Industrial/Land Transportation Pool (99 channels); and 2.5 MHz for the Business Pool (100 channels).<sup>5</sup> The consolidated 900 MHz B/ILT Pool was established for the private internal communication needs of site-by-site licensees engaged in clerical or commercial activities, the operation of educational, philanthropic, or ecclesiastical institutions, or the operation of hospitals, clinics, or medical associations,<sup>6</sup> as well as any corporation furnishing nonprofit radio communication service to its

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<sup>1</sup> 47 C.F.R. § 90.617(c), Table C – Business/Industrial/Land Transportation Category 896-901/935-940 MHz Band Channels (199 Channels) (2006).

<sup>2</sup> See Amendment of Part 90 of the Commission's Rules To Provide for Flexible Use of the 896-901 MHz and 935-940 MHz Bands Allotted to the Business and Industrial Land Transportation Pool, WT Docket No. 05-62; Oppositions and Petitions for Reconsideration of the 900 MHz Band Freeze Notice, DA 04-3013, *Notice of Proposed Rulemaking and Memorandum Opinion and Order*, 20 FCC Rcd 3814 (2005) (*Notice*).

<sup>3</sup> See "Wireless Telecommunications Bureau Freezes Applications in the 900 MHz Band," *Public Notice*, 19 FCC Rcd 18277 (2004) (*Freeze Public Notice*); see also *Notice*, 20 FCC Rcd at 3835-36 ¶¶ 64-68; see also Improving Public Safety Communications in the 800 MHz Band, *et al.*, WT Docket No. 02-55, *et al.*, *Report and Order*, 19 FCC Rcd 14969, 15075-78 ¶¶ 201-03, 15217-18, App. F (2004) (*800 MHz R&O*).

<sup>4</sup> See, e.g., *Notice*, 20 FCC Rcd at 3815-16 ¶¶ 1-3; 3819-20 ¶¶ 12-14.

<sup>5</sup> See Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, Amendment of Parts 2, 15, and 90 of the Commission's Rules and Regulations to Allocate Frequencies in the 900 MHz Reserve Band for Private Land Mobile Use, Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for, and to Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services, GEN Docket No. 84-1231 RM-4812, GEN Docket No. 84-1233 RM-4829, GEN Docket No. 84-1234 RM-4247, *Report and Order*, 2 FCC Rcd 1825, 1830-31 ¶¶ 45-46, 50 (1986) (*Allocation R&O*). The Commission also adopted "inter-pool" sharing to permit sharing of frequencies by those entities eligible in other service pools. *Id.* at 1831 ¶¶ 51-52.

<sup>6</sup> 47 C.F.R. §§ 90.603, 90.31, 90.35.

parent corporation or subsidiary.<sup>7</sup> Examples of 900 MHz B/ILT licensees include entities engaged in land transportation, utilities, manufacturing, and the petro-chemical industry.<sup>8</sup> Applications for new facilities on 900 MHz B/ILT frequencies are limited to private, internal use systems.<sup>9</sup>

3. In an effort to address the problem of commercial wireless interference to public safety communications in the 800 MHz band, the Commission adopted significant technical and procedural measures in July 2004 that implicated B/ILT licensees.<sup>10</sup> In reconfiguring the 800 MHz band, the Commission consolidated the B/ILT Pools in the 800 MHz and 900 MHz bands, and allowed any eligible B/ILT licensee to be licensed on the consolidated channels.<sup>11</sup> The Commission believed that consolidation of the B/ILT Pools would increase operational flexibility and spectrum efficiency, while rendering moot inter-category sharing and associated resource burdens.<sup>12</sup> Of particular relevance here, the Commission provided for additional flexibility in the 900 MHz band by allowing 900 MHz B/ILT licensees to initiate commercial mobile radio service (CMRS) operations on their authorized spectrum once a license is granted, or to assign their authorizations to others for CMRS use.<sup>13</sup> The Commission reasoned that, since it permitted CMRS use of private frequencies in the 800 MHz land mobile band, similarly flexible rules should apply in the 900 MHz land mobile spectrum, in the interest of regulatory symmetry.<sup>14</sup> The Commission also noted that in order to provide the “green space” necessary to effect

<sup>7</sup> 47 C.F.R. § 90.33.

<sup>8</sup> We note that many, though not all, 900 MHz B/ILT licensees may be further characterized as critical infrastructure industries (CII) licensees. *See, e.g., 800 MHz R&O*, 19 FCC Rcd at 14973 ¶ 4 n.11. There, the Commission noted that for purposes of the *800 MHz R&O* only, it defined CII licensees as non-public safety entities that nevertheless operate “public safety” radio services within the scope of Section 309(j)(2) of the Communications Act of 1934, as amended. 47 U.S.C. § 309(j)(2) defines “public safety radio services” as including private internal radio services used by State and local governments and non-government entities, and including emergency road services provided by not-for-profit organizations, that: (i) are used to protect the safety of life, health, or property; and (ii) are not made commercially available to the public. Examples of CII operations include communications systems that provide private internal radio services used by utilities, railroads, metropolitan transit systems, pipelines, private ambulances, volunteer fire departments, and not-for-profit organizations that offer emergency road services, such as the American Automobile Association (AAA). *800 MHz R&O*, 19 FCC Rcd at 14973 ¶ 4 n.11.

<sup>9</sup> Applications for frequencies in the B/ILT Category 900 MHz Band Pools are coordinated by frequency coordinators certified in the B/ILT Pools. *See* 47 C.F.R. § 90.35. As discussed below, subsequent to grant of a 900 MHz B/ILT license, a licensee may apply to modify the license to permit commercial operation on the license or to assign the license to another entity for commercial use. *See* 47 C.F.R. § 90.621(f).

<sup>10</sup> *See 800 MHz R&O; Improving Public Safety Communications in the 800 MHz Band, et al.*, WT Docket No. 02-55, *et al.*, *Supplemental Report and Order on Reconsideration*, 19 FCC Rcd 25120 (2004) (*800 MHz Supplemental R&O*); *Improving Public Safety Communications in the 800 MHz Band, et al.*, WT Docket 02-55, *et al.*, *Memorandum Opinion and Order*, 20 FCC Rcd 16015 (2005) (*800 MHz MO&O*); *Improving Public Safety Communications in the 800 MHz Band, et al.*, WT Docket No. 02-55, *et al.*, *Second Memorandum Opinion and Order*, 22 FCC Rcd 10467 (2007).

<sup>11</sup> *800 MHz R&O*, 19 FCC Rcd at 15126 ¶ 334.

<sup>12</sup> *Id.*

<sup>13</sup> *Id.* at 15127-28 ¶ 337. *See also* 47 C.F.R. § 90.621(f).

<sup>14</sup> *800 MHz R&O*, 19 FCC Rcd at 15127 ¶ 335. In 2000, the Commission had amended its rules to permit CMRS use of B/ILT frequencies in the 800 MHz land mobile band and allowed B/ILT licensees to transfer their licenses to CMRS entities. *See Implementation of Sections 309(j) and 337 of the Communications Act of 1934, As Amended*, WT Docket No. 99-87, *Report and Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 22709, 22761 ¶¶ 110-11 (2000).

reconfiguration of the 800 MHz band, Nextel might need to shift some of its operations from the 800 MHz to the 900 MHz band – a factor that further merited complementary CMRS rules in both bands.<sup>15</sup>

4. In September 2004, the Bureau issued a Public Notice freezing acceptance of applications for new 900 MHz B/ILT licenses until further notice.<sup>16</sup> The Bureau indicated that an exceptionally large number of applications for 900 MHz authorizations had been filed subsequent to the release of the *800 MHz R&O*, which allowed 900 MHz B/ILT licensees to initiate commercial operations on their licensed spectrum or to assign their authorizations to others for commercial use.<sup>17</sup> The Bureau noted its concern that additional such filings might compromise the ability to accommodate displaced systems while the 800 MHz band is reconfigured to abate unacceptable interference to public safety, critical infrastructure, and other “high site” 800 MHz systems.<sup>18</sup> The Bureau determined that applications for modification of existing facilities, assignment of license, or transfer of control of a licensee would continue to be accepted, subject to applicable rules regarding eligibility, loading, and other requirements.<sup>19</sup> In addition, applicants were advised that they might have recourse via the Commission’s waiver provisions to request an exception to the freeze.<sup>20</sup>

5. On February 10, 2005, the Commission adopted the *Notice* in WT Docket 05-62. The *Notice* proposed amendments to the Commission’s rules to facilitate more flexible use of the 900 MHz B/ILT band and to license any remaining spectrum in the band using a geographic area licensing scheme.<sup>21</sup> The Commission also proposed to license the subject spectrum in 19 blocks of ten contiguous channels each, and one block of nine contiguous channels.<sup>22</sup> The Commission asked whether it should reserve the proposed upper four channel blocks (QQ, RR, SS, and TT) for traditional B/ILT use.<sup>23</sup> The *Notice* also sought comment on defining the rights of B/ILT licensees already operating on the 900 MHz B/ILT frequencies,<sup>24</sup> and on using competitive bidding rules, in the event mutually exclusive applications were filed for the proposed 900 MHz geographic licenses.<sup>25</sup> The Commission also reaffirmed the Wireless Telecommunications Bureau’s freeze on new applications for 900 MHz B/ILT licenses.<sup>26</sup> The Commission noted the fundamental changes it was proposing in the service areas and channel blocks for future licensees in the 900 MHz B/ILT service, and found it appropriate to suspend new 900 MHz applications in the B/ILT Pool. The Commission concluded that allowing the continued filing of applications for new 900 MHz B/ILT licenses during the rulemaking period might limit the effectiveness

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<sup>15</sup> *800 MHz R&O*, 19 FCC Rcd at 15127 ¶¶ 335-36.

<sup>16</sup> *See Freeze Public Notice*, 19 FCC Rcd at 18277.

<sup>17</sup> *See id.*; *see also 800 MHz R&O*, 19 FCC Rcd at 15127-28 ¶ 337.

<sup>18</sup> *See Freeze Public Notice*, 19 FCC Rcd at 18278, *citing 800 MHz R&O*.

<sup>19</sup> *See Freeze Public Notice*, 19 FCC Rcd at 18278 n.7.

<sup>20</sup> *See id.* at 18278 n.7, *citing* 47 C.F.R. § 1.925.

<sup>21</sup> *Notice*, 20 FCC Rcd at 3815-16 ¶¶ 1-3; 3819-20 ¶¶ 12-14.

<sup>22</sup> *Id.* at 3823 ¶ 26.

<sup>23</sup> *Id.* at 3824 ¶ 30.

<sup>24</sup> *Id.* at 3825-27 ¶¶ 34-35.

<sup>25</sup> *Id.* at 3832-34 ¶¶ 57-63.

<sup>26</sup> *Id.* at 3835-36 ¶¶ 64-68.

of the decisions ultimately made in this proceeding.<sup>27</sup> In response to the *Notice*, the Commission received 20 comments, ten reply comments, and numerous *ex parte* filings.<sup>28</sup>

### III. DISCUSSION

#### A. Retention of Site-Based Licensing for 900 MHz B/ILT Channels

6. In this Report and Order, we retain the current site-based licensing paradigm for new applications for 900 MHz B/ILT licenses. In doing so, we decline to adopt at this time the geographic area and competitive bidding licensing rules and policies proposed in the *Notice*. We conclude, based on the record in this proceeding, that such action on balance best serves the public interest.

7. In the *Notice*, the Commission proposed service rules for 900 MHz B/ILT channels to provide licensees with the flexibility to employ the spectrum for any use permitted by the United States Table of Frequency Allocations contained in Part 2 of our rules (*i.e.*, fixed or mobile services).<sup>29</sup> The Commission tentatively concluded to adopt a geographic area licensing scheme for the 900 MHz B/ILT spectrum because such an approach would be consistent with flexible use management principles, and requested comment on that tentative conclusion.<sup>30</sup> The Commission also proposed licensing 19 blocks of ten contiguous channels, and one block of nine contiguous channels.<sup>31</sup> In conjunction with those proposals, the *Notice* also addressed issues regarding size of the geographic service areas,<sup>32</sup> rights and obligations of geographic area licensees, including the protection to be afforded incumbent systems,<sup>33</sup> emission and field strength limits,<sup>34</sup> performance requirements,<sup>35</sup> and competitive bidding rules.<sup>36</sup>

8. Commenters are divided on whether to utilize competitive bidding to resolve mutually exclusive competing applications for geographic area licenses. Some commenters enthusiastically support competitive bidding and flexible use rules (including geographic area licensing) for all unlicensed 900 MHz B/ILT spectrum.<sup>37</sup> For example, Nextel asserts that the existing 900 MHz B/ILT

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<sup>27</sup> *Id.* at 3836 ¶ 66.

<sup>28</sup> See Appendix A *infra* for a list of parties submitting comments, reply comments, and/or *ex parte* filings in response to the *Notice*, as well as the abbreviations or acronyms by which they are referred to in the text.

<sup>29</sup> *Notice*, 20 FCC Rcd at 3819-20 ¶¶ 12-14.

<sup>30</sup> *Id.* at 3820-21 ¶¶ 16-19.

<sup>31</sup> *Id.* at 3823-24 ¶¶ 26-30.

<sup>32</sup> *Id.* at 3821-22 ¶¶ 21-25.

<sup>33</sup> *Id.* at 3825-26 ¶¶ 32-36.

<sup>34</sup> *Id.* at 3828-29 ¶¶ 41-44.

<sup>35</sup> *Id.* at 3829-30 ¶¶ 45-52.

<sup>36</sup> *Id.* at 3831-34 ¶¶ 56-63.

<sup>37</sup> See generally Comments of BellSouth Corporation and BellSouth Telecommunications Incorporated (BellSouth Comments) (filed May 18, 2005); Comments of Electrocom, Inc. (filed May 18, 2005) (suggesting that the Commission ascertain whether Nextel can move its 800 MHz commercial operation into newly-acquired Sprint spectrum, pursuant to the Sprint-Nextel merger, thereby obviating the need to use 900 MHz B/ILT spectrum); Comments of National Public Safety Telecommunications Council (NPSTC Comments) (filed May 17, 2005); Comments of Nextel Communications, Inc. (Nextel Comments) (filed May 18, 2005) (subsequent to the release of (continued....))



access rules are limiting, inefficient, and a gross underutilization of spectrum that, if unchanged, will impede the ability of the marketplace to respond to consumer demand.<sup>38</sup> While conceding that there may be circumstances under which the Commission may need to “set aside” spectrum for particular uses in order to achieve important public interest goals, Nextel notes the Commission has in the past decade adopted flexible and competitive licensing policies to promote an innovative marketplace, and that auctioning all unused 900 MHz B/ILT spectrum will facilitate successful 800 MHz reconfiguration.<sup>39</sup> SouthernLINC also applauds the Commission’s tentative conclusion to auction the 900 MHz B/ILT white space on a geographic area basis, and generally supports the other proposals contained in the *Notice*, particularly adopting a band plan of 19 blocks of ten contiguous channels and one block of nine contiguous channels.<sup>40</sup>

9. The majority of commenters oppose using competitive bidding to license the remaining 900 MHz B/ILT spectrum using geographic service areas,<sup>41</sup> many of whom urge the Commission, if it were to conduct an auction, to set aside some portion of currently unlicensed 900 MHz B/ILT white

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the *Notice*, Nextel Communications, Inc. and Sprint Corporation completed their merger, with the resulting company being called Sprint Nextel Corporation; in this Report and Order, we refer to comments from Nextel and its successor, Sprint Nextel Corporation, collectively as Nextel Comments); Comments of PCIA – The Wireless Infrastructure Association (PCIA Comments) (filed May 18, 2005) (expressing “general support” for an auction of most unused 900 MHz B/ILT spectrum, while also urging the Commission to set aside 40 existing B/ILT channels for the future growth needs of incumbents); Comments of Southern Communications Services, Inc. d/b/a SouthernLINC Wireless (SouthernLINC Comments) (filed May 18, 2005).

<sup>38</sup> Nextel Comments at 1.

<sup>39</sup> *Id.* at 3-4. Nextel also notes that the Commission, in the *800 MHz R&O*, recognized that Nextel will have to shift some of its operations from the 800 MHz band to the 900 MHz band in order to provide the “green space” necessary to effect reconfiguration of the 800 MHz band. Nextel states that an auction of all unused 900 MHz B/ILT white space would give it the opportunity to bid for additional 900 MHz spectrum to complete the reconfiguration. *Id.* at 5-7. See also *Ex Parte* Letter from James B. Goldstein, Director – Spectrum, Sprint Nextel Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed May 4, 2007) at 2 (“Sprint Nextel stressed that access to additional 900 MHz spectrum via an auction was critical to achieving the Commission’s public safety objectives in adopting the 800 MHz band reconfiguration”) (Nextel May 4 *Ex Parte* Letter).

<sup>40</sup> SouthernLINC Comments at 3, 6-8.

<sup>41</sup> See generally Comments of Association of American Railroads (AAR), American Petroleum Institute, MRFAC, Inc., National Association of Manufacturers, and United Telecom Council (Joint Comments) (filed May 18, 2005) (subsequent to release of the *Notice*, United Telecom Council changed its name to Utilities Telecom Council); Comments of Aeronautical Radio, Inc. (ARINC Comments) (filed May 18, 2005); Comments of the Association of American Railroads (AAR Comments) (filed May 18, 2005); Comments of Blooston, Mordkofsky, Dickens, Duffy & Prendergast (on behalf of Automobile Club of Southern California, California State Automobile Association, and Telecris Biotherapeutics, Inc.) (Blooston Comments) (filed May 18, 2005); Comments of Cleco Corporation (Cleco Comments) (filed May 18, 2005); Comments of Florida Power & Light (FPL Comments) (filed May 18, 2005); Comments of Public Service Electric and Gas (PSEG) Company, PSEG Power LLC, PSEG Energy Resources & Trade LLC, and PSEG Services Corporation (PSEG Comments) (filed May 18, 2005); Comments of South Carolina Public Service Authority (South Carolina Comments) (filed May 18, 2005); Comments of United Parcel Service (UPS Comments) (filed May 18, 2005). See also Reply Comments of the Enterprise Wireless Alliance (EWA Reply Comments) (filed Jun. 2, 2005) (stating that an auction of all unencumbered 900 MHz B/ILT channels nationwide goes beyond the relief needed to facilitate 800 MHz rebanding); Reply Comments of Northern Indiana Public Service Company (filed Jun. 2, 2005) (supporting positions taken by Joint Commenters); Letter from Wallace F. Tillman, Vice-President, National Rural Electric Cooperative Association, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed May 23, 2005) (supporting positions taken by Joint Commenters).

space for traditional B/ILT use. For example, the Joint Commenters contend that auctioning all 900 MHz B/ILT white space is tantamount to a “complete loss” of the 900 MHz band for incumbent B/ILT licensees.<sup>42</sup> Further, they allege that the *Notice* gives insufficient consideration to incumbents’ spectrum needs, is excessively skewed in favor of commercial operations and spectrum auctions, and, if adopted, would “strand” incumbents at their existing capacity levels and service areas.<sup>43</sup> The Joint Commenters question whether the public interest truly is best served by allocating all unencumbered spectrum for cell phones and utilizing spectrum auctions in light of the growth needs of traditional B/ILT licensees.<sup>44</sup> In the event the Commission were to decide to auction and license all available 900 MHz B/ILT white space, the Joint Commenters urge the Commission to reserve the upper four channel blocks for continued site-based licensing under current eligibility requirements.<sup>45</sup>

10. Other commenters express similar concerns about auctioning all available 900 MHz B/ILT white space. Recognizing that the Commission may conduct some type of auction of unencumbered 900 MHz B/ILT spectrum, these commenters also urge the Commission to set aside a portion of currently unlicensed 900 MHz B/ILT spectrum for traditional B/ILT use. For example, ARINC argues that, because many B/ILT licensees perform critical public safety-related functions, the Commission should set aside an unspecified portion of the spectrum for traditional B/ILT use.<sup>46</sup> Blooston alleges that, if the Commission were to proceed with the proposed licensing scheme (without first setting aside channels dedicated to traditional B/ILT use), critical infrastructure industry users would be forced to rely on often-undependable commercial providers and would not be able to control their own communications in the event of emergency.<sup>47</sup>

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<sup>42</sup> Joint Comments at 3-4.

<sup>43</sup> *Id.* at 3.

<sup>44</sup> *Id.* at 5.

<sup>45</sup> *Id.* at 3, 22. The upper four channel blocks as proposed in the *Notice* consisted of three blocks of ten contiguous channels and one block of nine contiguous channels, for a total of 39 channels. *See Notice*, 20 FCC Rcd at 3824 ¶ 30.

<sup>46</sup> ARINC Comments at 4.

<sup>47</sup> Blooston Comments at 4. *See also* FPL Comments at 4-7 (suggesting that the 99 channels (2.5 MHz) originally allocated in 1986 to the Industrial/Land Transportation Pool be excluded from any 900 MHz auction and that it be reserved for private, internal use, to be assigned on a frequency-coordinated, “first come, first served” site-by-site basis; an auction of all the 900 MHz B/ILT white space would have CII entities competing against commercial wireless providers); PCIA Comments at 3-6 (recommending that, for the sake of future growth of present 900 MHz B/ILT systems, the Commission set aside 40 channels; because the greatest demand has been for trunked business use, PCIA suggests that the 40 channels be extracted from the former Business Pool); EWA Reply Comments at 6 (proposing that an overlay auction should occur only in markets with a need to facilitate the 800 MHz reconfiguration process (*i.e.*, where Nextel operates an iDEN network, where there are operational 800 MHz public safety systems that will be deployed before 800 MHz reconfiguration in the area is completed, and where Nextel has inadequate 800 MHz and 900 MHz spectrum to accommodate reconfiguration). *See also* Comments of M/A-COM, Inc. (M/A-COM Comments) (filed May 18, 2005) at 5, 6-7, 13 (urging “caution” before proceeding with any auction, and suggesting that the Commission separate (spectrally or geographically) the systems of private users and commercial users, as it did in the 800 MHz band; to do any less would be to invite harmful interference. In particular, M/A-COM suggests “transitioning” B/ILT and non-B/ILT systems to separate segments of the band, with the proposed upper four channel blocks (QQ, RR, SS, and TT – which amounts to 39 channels) dedicated to traditional B/ILT use).

11. Other commenters oppose licensing by auction because of its potentially negative impact on incumbent 900 MHz B/ILT licensees. FPL notes that it has invested roughly \$40 million in its 900 MHz communications system, and suggests that an auction of all remaining unencumbered 900 MHz B/ILT spectrum would jeopardize both that investment and its ability to provide vital communications.<sup>48</sup> PSEG strongly opposes an auction, noting that such an action would effectively preclude “normal system growth” and could limit the necessary, socially beneficial expansion of existing 900 MHz B/ILT systems.<sup>49</sup> South Carolina asserts that reallocating 900 MHz B/ILT channels for CMRS use would “strand” incumbent operators at existing capacity levels, and would frustrate its ability to expand its 900 MHz trunked system to geographic areas within its electrical grid, but as yet outside its existing trunked system.<sup>50</sup> In addition to affiliating itself with the Joint Commenters, UPS urges that any rules the Commission adopts to increase flexible use in the 900 MHz band must not adversely affect incumbent operations.<sup>51</sup> UPS expresses concern that licensing the spectrum in this band on other than a site-based basis would require UPS and those similarly situated to acquire far more spectrum than needed.<sup>52</sup>

12. We find that the record supports retention of the current site-based licensing formula for the 900 MHz B/ILT spectrum, and therefore we decline to adopt competitive bidding rules or geographic service areas to license 900 MHz B/ILT “white space.” We are persuaded that the dedicated spectrum allotted to B/ILT licensees at 900 MHz represents one of the few remaining opportunities for such licensees to obtain much-needed spectrum.<sup>53</sup> We concur with those commenters who point out that transitioning to the licensing paradigm proposed in the *Notice* could in many cases frustrate beneficial system growth. In the 900 MHz B/ILT spectrum, geographic-based service area licensing in lieu of site-based licensing would do little in terms of meeting the needs of current and future 900 MHz B/ILT licensees, many of whom would be forced to acquire at auction more spectrum than what they actually need, or can afford, to ensure that they have adequate spectrum necessary for wireless telecommunications systems to support their operations.<sup>54</sup> Even if a traditional 900 MHz B/ILT licensee determined that it was fiscally responsible to acquire a geographic-based license, we are concerned that portions of the spectrum would remain unused and undervalued, precisely the result the Commission sought to avoid when it opened this proceeding.<sup>55</sup>

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<sup>48</sup> FPL Comments at 2-3.

<sup>49</sup> PSEG Comments at 9.

<sup>50</sup> South Carolina Comments at 3.

<sup>51</sup> UPS Comments at 1.

<sup>52</sup> *Id.* at 4-5.

<sup>53</sup> *See, e.g.*, Joint Comments at 3-5.

<sup>54</sup> *See* South Carolina Comments at 3-4 (noting that it has only ever sought a license for spectrum it actually and immediately needs); UPS Comments at 4-5 (requiring traditional 900 MHz B/ILT licensees to purchase spectrum rights far exceeding their needs is grossly inefficient); PCIA Comments at 4 (noting that traditional 900 MHz B/ILT licensees seeking spectrum at auction for private, internal use cannot value the spectrum itself as highly as an entity building a business model on revenue generated directly from the spectrum; a 900 MHz B/ILT licensee would be hard-pressed to justify acquisition of a spectrum “market” (either MEA or even BEA), as any such “market” would be well in excess of the legitimate needs of a traditional 900 MHz B/ILT licensee). *See also* EWA Reply Comments at 4 (stating that an auction of all 900 MHz B/ILT channels in all markets substantially exceeds the relief needed to facilitate 800 MHz rebanding).

<sup>55</sup> *See* UPS Comments at 4-5; PCIA Comments at 4.



13. We acknowledge the vital communications role that 900 MHz B/ILT spectrum plays in enabling traditional B/ILT licensees to safeguard our nation's critical infrastructure industries. Such licensees must ensure that they have access to communications pathways to meet the essential communications needs of such varied and critical industries as utilities, land transportation, manufacturers/industry, and petro-chemical. We note, for example, that 900 MHz B/ILT spectrum is used by CII licensees to protect industrial facilities from tampering or attack, and to respond to emergency situations and outages.<sup>56</sup> The 900 MHz B/ILT spectrum is also used by a range of licensees in a variety of ways to facilitate their efficient operations, to enable the cost-effective production of goods and services offered to the public, and to promote the safety of employees.<sup>57</sup> Because of the nature of their operations, 900 MHz B/ILT incumbents demand substantial control over their own communications systems, and require greater certainty for their vital communications needs than some commercial carriers are currently willing to provide.<sup>58</sup> Commenters have pointed out that, in some locations, commercial service offerings simply are not available to meet their needs. Where commercial service is available, in times of crisis and emergency, the public switched telephone network (PSTN) and commercial wireless services in an affected area can become overloaded and unreliable.<sup>59</sup> FPL explained that, in 1985, it "had piloted the use of a CMRS system for utility restoration communications. . . . The CMRS system failed, was congested, and did not provide coverage to all the remote rural areas required for utility operations."<sup>60</sup> Similarly, NIPSCO, a provider of electric power and gas in northern Indiana, states that, "[i]n times of emergency, commercial wireless systems are often unable to handle the large volume of calls, and call-blocking occurs. . . . NIPSCO depends upon its internal wireless infrastructure to ensure that it has reliable and readily available radio communications so that it can quickly respond not only to emergencies, but also to other vital matters that affect its power network and customers."<sup>61</sup> For these reasons, we conclude that the public interest is furthered by continuing to make the 900 MHz B/ILT spectrum available to these entities, to be licensed on a site-by-site basis so as to meet the actual service area needs of each licensee and eligible applicant.<sup>62</sup>

14. One of the underlying rationales for proposing geographic service areas and competitive bidding rules to license 900 MHz B/ILT spectrum white space was the need to facilitate 800 MHz rebanding, on the theory that 800 MHz commercial licensees would need to relocate to a band with

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<sup>56</sup> See, e.g., ARINC Comments at 2-3; Joint Comments at 5-7 (noting that 900 MHz B/ILT licensees often permit municipal agency use of their systems, including military installations, school districts, ground and air ambulance services, American Red Cross, etc.), 8-9 (noting the role of 900 MHz B/ILT spectrum during the removal of hazardous materials, by employees working in confined spaces, and to support responsive action in emergency situations).

<sup>57</sup> See, e.g., Joint Comments at 5-11; ARINC Comments at 1-2; PSEG Comments at 9.

<sup>58</sup> See, e.g., Blooston Comments at 3-4.

<sup>59</sup> See *id.* at 3-4; FPL comments at 8-9.

<sup>60</sup> FPL Comments at 8. FPL pointed out that during the 2004 hurricane season, when south Florida was hit by three major hurricanes, it observed that "the local CMRS systems were heavily damaged and very congested. During these emergency periods, FPL extensively used its 900 MHz system for the continued power restoration efforts." *Id.*

<sup>61</sup> Reply Comments of Northern Indiana Public Service Company at 2-3.

<sup>62</sup> We note that our action here does not adversely affect the right of PLMR licensees in the 900 MHz B/ILT band either to assign or convert their licenses to CMRS use. CMRS licensees operating in the 900 MHz B/ILT spectrum, as well as PLMR licensees, will be subject to the interference protection rules we adopt in this *Order*. See Section III.B *infra*.

similar spectral characteristics.<sup>63</sup> Nextel has indicated that it has acquired hundreds of 900 MHz B/ILT site-based licenses, and will continue to acquire such licenses, in order to support 800 MHz rebanding.<sup>64</sup> In addition, Nextel has obtained special temporary authority (STA) from the Commission to operate on a temporary basis on 900 MHz B/ILT spectrum in order to support its 800 MHz rebanding efforts.<sup>65</sup> Finally, EWA has pointed out that Nextel is also using spectrum leasing arrangements as a means for obtaining 900 MHz B/ILT spectrum to be used on a time-limited basis to facilitate 800 MHz rebanding.<sup>66</sup> Those options remain open to Nextel under the action we take in this Report and Order. We conclude that, in light of the opportunities Nextel has for obtaining 900 MHz B/ILT spectrum to support its 800 MHz rebanding activities, adoption of geographic area licensing and competitive bidding rules for 900 MHz B/ILT spectrum is not essential to the success of the 800 MHz rebanding process. As discussed above, adoption of such policies would impede the effective use of this spectrum by many other incumbents and potential licensees in the 900 MHz B/ILT band. We determine that the approach adopted in this Report and Order will best balance the competing demands for 900 MHz B/ILT spectrum at this time.

15. Finally, we received comments urging us to reallocate spectrum in the 900 MHz B/ILT band to public safety operations; *i.e.*, that the Commission assign for public safety use at least ten channels for two-way digital paging.<sup>67</sup> We conclude that this proceeding is not the appropriate forum for addressing this request. As noted by Blooston, the request to reallocate 900 MHz B/ILT spectrum is beyond the scope of this proceeding.<sup>68</sup> EWA also has pointed out that “a nationwide reallocation is not possible given the level of existing use by enterprise and commercial licensees.”<sup>69</sup> The Commission has

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<sup>63</sup> 800 MHz R&O, 19 FCC Rcd at 15127 ¶ 335.

<sup>64</sup> See Nextel May 4 *Ex Parte* Letter at 1 (“Sprint Nextel explained that over the past several years its [*sic*] has acquired and continues to acquire *hundreds* of Business/Industrial Land Transportation (‘B/ILT’) ‘site-based’ licenses and wide-area Specialized Mobile Radio (‘SMR’) licenses in the 900 MHz band . . . making it the largest holder of licensed 900 MHz spectrum”) (emphasis in original).

<sup>65</sup> See, e.g., FCC File Nos. 0002725012 (Melbourne-Titusville, Florida; Call Sign WQFZ889); 0002472303 (Boston, Massachusetts; Call Sign WQFZ884); 0002780344 (Philadelphia-Wilmington-Trenton; Call Sign WQFZ895); 0002954496 (Chicago; Call Sign WQGV603). To date, Nextel has been granted STAs to operate on multiple 900 MHz B/ILT frequencies in 101 markets.

<sup>66</sup> See *Ex Parte* Letter from Mark E. Crosby, President, Enterprise Wireless Alliance, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed May 14, 2007) at 3 (EWA May 14 *Ex Parte* Letter).

<sup>67</sup> See NPSTC Comments at 3 (urging the Commission to allocate channels within the 900 MHz B/ILT Pool for public safety digital paging); *Ex Parte* Letter from Vincent R. Stile, Chair, NPSTC, to Kevin J. Martin, Chairman, Federal Communication Commission (filed May 3, 2007) at 2 (elaborating that the Commission should designate at least ten channels (to provide five 25 kHz paired channels) for digital two-way paging); see also Reply Comments of Monroe County, NY (filed Jun. 10, 2005) at 5-6 (endorsing NPSTC’s suggestion regarding reallocation of 900 MHz B/ILT spectrum to public safety); *Ex Parte* Letter from James M. Dabbs III, Critical Response Systems, Inc., to Marlene H. Dortch (filed Apr. 24, 2007) at 2 (urging that 900 MHz B/ILT spectrum be available for public safety two-way paging use on co-primary basis with B/ILT licensees); *Ex Parte* Letter from Richard J. Verdouw, Director of Communications, Monroe County, NY Department of Public Safety, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed May 29, 2007) (urging that 900 MHz spectrum be available to public safety for advanced alerting systems).

<sup>68</sup> Blooston Comments at 3.

<sup>69</sup> EWA May 14 *Ex Parte* Letter at 2. EWA further stated: “NPSTC did not and would be hard pressed to demonstrate that their emergency response digital paging requirements can be satisfied only on 900 MHz B/ILT (continued....)”

directed the Public Safety and Homeland Security Bureau and the Wireless Telecommunications Bureau to consider the issue of permitting “the use of 900 MHz B/ILT pool of spectrum for two-way paging systems either owned by public safety users or dedicated to the provision of emergency communications,” and to determine what action, if any, should be implemented.<sup>70</sup> We expect that the two Bureaus will give appropriate consideration to this issue in due course.

## **B. Interference Protection in the 900 MHz B/ILT Band**

16. While we decline to adopt rules to conduct an auction of 900 MHz B/ILT “white space” spectrum, we note that issues of interference protection in the 900 MHz B/ILT band remain outstanding. The Commission, in both the *Notice* and the *800 MHz MO&O*,<sup>71</sup> indicated that WT Docket 05-62 is the appropriate forum in which to address whether the interference protection and abatement requirements adopted for the 800 MHz band should likewise be applied to 900 MHz B/ILT spectrum.<sup>72</sup> For the reasons stated below, we adopt modified interference protection standards for the 900 MHz B/ILT frequencies based on those previously implemented in the 800 MHz band.<sup>73</sup> In addition, we will not at this time mandate an interference resolution process, but the B/ILT community and its representatives, including authorized frequency coordinators, are free to establish a system for resolving any interference situations that may arise.

17. In the *Notice*, the Commission proposed requiring geographic area licensees to afford the same protection to incumbent 900 MHz B/ILT systems that 900 MHz SMR MTA licensees must currently provide to incumbents.<sup>74</sup> Specifically, the *Notice* proposed to require geographic area licensees to protect incumbent B/ILT systems either: (1) by locating their stations at least 113 km (70 miles) from any incumbent’s facilities; (2) by complying with the co-channel separation standards of the “short-spacing” rule if they seek to operate stations located less than 113 km (70 miles) from an incumbent licensee’s facilities; or (3) by negotiating an even shorter distance with the incumbent licensee.<sup>75</sup> The Commission also asked commenters to consider whether additional interference protection requirements were necessary and, if so, what additional rules should apply and why.<sup>76</sup> The Commission noted that the architecture of incumbent systems within the band may be significantly different than that of new entrants and could lead to interference mechanisms, such as receiver overload or intermodulation, that  
(Continued from previous page) \_\_\_\_\_  
channels. Absent such a demonstration, the FCC should reject NPSTC’s request for a ‘specific commitment’ as overreaching, unsubstantiated and spectrally inefficient for all concerned.” *Id.*

<sup>70</sup> Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks, EB Docket No. 06-119, WC Docket No. 06-63, *Order*, 22 FCC Rcd 10541, 10572 ¶ 101 (2007); *see also Ex Parte* Letter from Vincent R. Stile, Chair, NPSTC, to Kevin J. Martin, Chairman, Federal Communication Commission (filed Aug. 3, 2007) at 1 (noting the Independent Panel’s positive view of paging systems in certain emergency situations); *Ex Parte* Letter from Kenneth E. Hardman, Counsel for American Association of Paging Carriers, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed Nov. 19, 2007) at 1 (explaining comments submitted in EB Docket No. 06-119, and urging lifting of the freeze on the filing of new 900 MHz B/ILT applications).

<sup>71</sup> *See 800 MHz MO&O*, 20 FCC Rcd at 16070-71 ¶ 124.

<sup>72</sup> *Id.*; *see also* note 115 *infra*.

<sup>73</sup> *See 800 MHz Supplemental R&O*, 19 FCC Rcd at 25136-41 ¶¶ 37-45; *see also* paras. 24-26 *infra*.

<sup>74</sup> *Notice*, 20 FCC Rcd at 3825-26 ¶ 34, *citing* 47 C.F.R. § 90.621(b).

<sup>75</sup> *See generally* 47 C.F.R. § 90.621(b).

<sup>76</sup> *Notice*, 20 FCC Rcd at 3826 ¶ 35.

may not be fully addressed by the interference protection proposal or co-channel spacing requirements.<sup>77</sup> The Commission specifically asked whether the overall approach to interference protection should be modified to include the interference abatement requirements mandated in the *800 MHz R&O*,<sup>78</sup> or an enhanced or voluntary Best Practices<sup>79</sup> approach to address potential interference in this band.<sup>80</sup>

18. A number of commenters urge adoption of the same or similar interference abatement requirements for the 900 MHz B/ILT spectrum as those previously established for a post-rebanded 800 MHz environment in the *800 MHz R&O*. In initial comments in this proceeding, for example, the Joint Commenters assert that it is imperative that incumbents be adequately protected from interference caused by new entrants.<sup>81</sup> In particular, they state the Commission must not reduce the standard co-channel separation requirements to provide (cellularized) geographic area licensees with greater flexibility because to do so would result in unacceptable interference to incumbent high-site, high-power CII networks.<sup>82</sup> They also assert there is reason to believe the introduction of commercial cellular networks into the 900 MHz bands will cause harmful interference to incumbents in the bands.<sup>83</sup> AAR also urges adoption of the 800 MHz interference abatement rules. It states that by permitting CMRS providers to operate on channels immediately adjacent to incumbents, without geographic or spectral separation, the Commission will have created a *de facto* interleaving of channels occupied by incompatible system architectures.<sup>84</sup> Blooston encourages the Commission to adopt the 800 MHz interference requirements now for the 900 MHz B/ILT environment in anticipation of the introduction of cellular operations in the 900 MHz B/ILT spectrum that may increase the risk of harmful interference.<sup>85</sup>

19. In a subsequent *ex parte* presentation, the Joint Commenters, joined by EWA and UPS, provided a more detailed explanation of their position regarding interference protection.<sup>86</sup> They urge that

<sup>77</sup> Notice, 20 FCC Rcd at 3826 ¶ 35.

<sup>78</sup> *Id.*, citing *800 MHz R&O*, 19 FCC Rcd at 15021-41 ¶¶ 88-132; *see also* Petition of the Association of American Railroads for Reconsideration, WT Docket No. 02-55 *et al.*, filed Dec. 17, 2004 (requesting the Commission to adopt interference abatement procedures for incumbents in the 900 MHz B/ILT band equivalent to those adopted in the *800 MHz R&O*); Petition of the National Association of Manufacturers and MRFAC, Inc. (NAM/MRFAC) for Reconsideration, WT Docket No. 02-55 *et al.*, filed Dec. 22, 2004 (seeking adoption of Enhanced Best Practices and stringent interference protection for 900 MHz B/ILT incumbents against CMRS operations); Petition of Exelon Corporation for Reconsideration, WT Docket No. 02-55 *et al.*, filed Dec. 22, 2004 (urging the Commission to extend the interference abatement requirements of the *800 MHz R&O* to incumbent 900 MHz licensees).

<sup>79</sup> *See, e.g.*, *800 MHz R&O*, 19 FCC Rcd at 15034-37 ¶¶ 115-123.

<sup>80</sup> Notice, 20 FCC Rcd at 3826 ¶ 35.

<sup>81</sup> Joint Comments at 13.

<sup>82</sup> *Id.* at 13-14.

<sup>83</sup> *Id.* at 14-15.

<sup>84</sup> AAR Comments at 12, 17.

<sup>85</sup> Blooston Comments at 8. *See also generally* ARINC Comments at 7; Cleco Comments at 2; FPL Comments at 10; Comments of Kenwood USA Corporation (filed May 18, 2005) at 3-4; M/A-COM Comments at 7-9; PSEG Comments at 15-16; South Carolina Comments at 6-7; UPS Comments at 6; EWA Reply Comments at 11-12 (suggesting adoption of 800 MHz-like rules may be a solution to potential interference); Reply Comments of Northern Indiana Public Service Company (NIPSCO) at 5-6 (filed Jun. 2, 2005).

<sup>86</sup> *See Ex Parte* Letter from Tracy P. Marshall, Keller and Heckman LLP, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed Apr. 13, 2007) (Joint Commenters April 13 *Ex Parte* Letter).

section 90.672(a) of the Commission's rules<sup>87</sup> regarding unacceptable interference to non-cellular 800 MHz licensees from 800 MHz cellular systems or Part 22 cellular systems be amended to include 900 MHz B/ILT spectrum. Section 90.672(a) defines "unacceptable interference" as occurring when a fully operational transceiver receives minimum median desired signal strengths of -104/-101 dBm, as measured at the radio frequency (RF) input of the receiver of a mobile/portable unit,<sup>88</sup> and when a voice transceiver receives an undesired signal or signals that cause the measured Carrier to Noise plus Interference (C/(I+N)) ratio of a receiver to be less than 20 dB.<sup>89</sup> The Joint Commenters also ask us to amend section 90.672(b) of the Commission's rules regarding minimum receiver requirements<sup>90</sup> for 900 MHz B/ILT spectrum as follows: for voice units intended for mobile/portable use: 60 dB intermodulation rejection ratio; 60 dB adjacent channel rejection; and -116 dBm reference sensitivity.<sup>91</sup> Finally, they ask that section 90.674 of the Commission's rules,<sup>92</sup> which prescribes interference resolution procedures, including the establishment of an electronic means for transmitting interference notifications, for non-cellular licensees operating in the 806-824/851-869 MHz band, 800 MHz Enhanced Specialized Mobile Radio (ESMR) licensees, and Part 22 Cellular Radiotelephone licensees, be extended to the 900 MHz B/ILT spectrum, with the expectation that the 900 MHz land mobile user community will eventually develop and maintain an independent notification system.<sup>93</sup>

20. Nextel opposes implementing the same standards in 900 MHz B/ILT spectrum as the Commission adopted for post-rebanded 800 MHz spectrum. Initially, in responding to the proposals set out in the *Notice*, Nextel asserts that new 900 MHz B/ILT geographic area licensees should provide the same level of protection to co-channel 900 MHz B/ILT incumbents that 900 MHz SMR licensees must provide,<sup>94</sup> and that incumbents are entitled to protection within their originally-licensed 40 dBμV/m field strength contours.<sup>95</sup> Further, it urges voluntary "Best Practices" and a commitment by 900 MHz CMRS licensees to cooperate on a case-by-case basis with incumbent 900 MHz B/ILT licensees.<sup>96</sup> Nextel cautions strongly against adopting the interference abatement requirements adopted in the *800 MHz R&O*, on the grounds, *inter alia*, that there are no public safety channels allocated at 900 MHz; that incumbents can finance robust, interference-resistant systems; that there have been no complaints regarding Nextel's dual band 800 MHz/900 MHz ESMR system (operating since 2002); and that to adopt

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<sup>87</sup> 47 C.F.R. § 90.672(a).

<sup>88</sup> See 47 C.F.R. § 90.672(a)(1)(i)(A), (B).

<sup>89</sup> See 47 C.F.R. § 90.672(a)(1)(ii)(B); Attachment to Joint Commenters April 13 *Ex Parte* Letter.

<sup>90</sup> 47 C.F.R. § 90.672(b).

<sup>91</sup> See Attachment to Joint Commenters April 13 *Ex Parte* Letter. Currently, section 90.672(b) sets the minimum performance specifications for voice units intended for mobile/portable use, respectively, at 75/70 dB intermodulation rejection ratio, 75/70 dB adjacent channel rejection ration, and -116 dBm reference sensitivity. 47 C.F.R. § 90.672(b).

<sup>92</sup> 47 C.F.R. § 90.674.

<sup>93</sup> See Attachment to Joint Commenters April 13 *Ex Parte* Letter.

<sup>94</sup> See 47 CFR § 90.621(b).

<sup>95</sup> Nextel Comments at 15.

<sup>96</sup> *Id.* at 16-17.



the 800 MHz interference measures for the 900 MHz white space would impose substantial operational burdens on geographic licensees, and would be contrary to the FCC's flexible use policies.<sup>97</sup>

21. In a subsequent *ex parte* presentation, Nextel suggested that, to the extent the Commission looks to the 800 MHz rebanding proceeding for guidance regarding interference protection standards and practices for the 900 MHz B/ILT spectrum, the interference protection standards that apply to the 800 MHz band's interleaved spectrum during the transition to spectral segregation would be more appropriate than the standards to be applied when the rebanding is completed.<sup>98</sup> Nextel avers that the interference abatement protection it (Nextel) has to extend in an interleaved environment, during the rebanding transition, while lower than the protection afforded post-rebanding, is a more comparable standard in light of the nature of operations in the 900 MHz B/ILT band.<sup>99</sup>

22. We note that in the *800 MHz Supplemental R&O*, the Commission acknowledged that the rules adopted for a post-rebanded environment could impose substantial operational restrictions on ESMR carriers operating in the interleaved channels prior to completion of band reconfiguration, and that field experience had shown that a lesser standard, while less "complete," could nevertheless provide meaningful interference protection during transition.<sup>100</sup> The Commission therefore waived sections 22.970(a) and 90.672(a) of the rules until band reconfiguration is complete in a particular NPSPAC region.<sup>101</sup> In waiving the rules, the Commission determined that, during the interim transition period, non-cellular systems would enjoy interference protection for signal strengths of -85 dBm for portables and -88 dBm for mobiles.<sup>102</sup> While noting that these levels were not universally applauded, the Commission observed that they were supported by Nextel and several commercial, private, and public safety members of the 800 MHz community.<sup>103</sup> The Commission found a direct relationship between these interim interference protection levels and the ability of ESMR and cellular carriers to serve their

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<sup>97</sup> Nextel Comments at 16-17. *See also* BellSouth Comments at 4, 6 (urging the Commission to consider allowing incumbents to adjust their 40 dBμV/m contour if needed to prevent interference).

<sup>98</sup> Nextel May 4 *Ex Parte* Letter at 3.

<sup>99</sup> *Id.*, citing *800 MHz Supplemental R&O*, 19 FCC Rcd at 25137 ¶ 38. Broadly speaking, there are two time periods, with two distinct sets of rules, for the 800 MHz reconfiguration: (1) during the transition to rebanding within each of the 55 NPSPAC regions; and (2) after rebanding has been completed in a NPSPAC region. In the *800 MHz Supplemental R&O*, the Commission held that, because the spectral environment at 800 MHz during the transition is interleaved (*i.e.*, where public safety licensees operate on channels adjacent to commercial carriers), a lower interference protection standard than will be applicable after completion of rebanding is appropriate. *See 800 MHz Supplemental R&O*, 19 FCC Rcd at 25137 ¶ 38.

<sup>100</sup> *800 MHz Supplemental R&O*, 19 FCC Rcd at 25137 ¶ 38.

<sup>101</sup> *Id.* Under the "interim standards" waiver, non-cellular systems meeting a -85 dBm (portable) or -88 dBm (mobile) signal strength threshold receive the full protection measures adopted in the *800 MHz R&O*. While the Commission was not ready to say that the -85 dBm/-88 dBm interim values struck "an exact balance between" the competing interests of public safety providers and cellular telephone carriers, it believed the interim interference protection rules were "within the range of reason." Also, the Commission did not believe that the interim levels, alone, would provide sufficient interference protection for public safety communications, and cautioned CMRS licensees to exercise the utmost diligence in addressing reports of interference even in cases in which the interim levels are not met. *Id.* at 25137-41 ¶¶ 39-45.

<sup>102</sup> *Id.* at 25137-38 ¶ 39.

<sup>103</sup> *Id.* at 25137-38 ¶ 39.

subscribers adequately, a factor affecting both the public's access to wireless services and the viability of a carrier's business.<sup>104</sup>

23. We observe that the record indicates that a spectrally interleaved environment, where technically different systems operate on a co-channel and/or adjacent channel basis, is developing within the 900 MHz band. For example, Nextel has pointed out that it has acquired numerous 900 MHz B/ILT site-based licenses, and will continue to acquire such licenses to support its dual-band 800 MHz/900 MHz iDEN network.<sup>105</sup> We have amended our rules to permit PLMR licensees to convert their operations in the 900 MHz B/ILT band to CMRS or to assign their authorizations to another entity to use for CMRS operations.<sup>106</sup> Incumbent 900 MHz B/ILT licensees have indicated that some of them are adopting new technologies, such as the Motorola Harmony iDEN system, whose operations differ from traditional B/ILT operations and more closely resemble the operations of CMRS carriers.<sup>107</sup> Based on the record before us, we conclude that it is appropriate to adopt an interference protection standard that accommodates the interleaved nature of operations in the 900 MHz B/ILT band and that will guard against harmful interference to duly authorized licensees in the band.

24. Accordingly, we adopt standards in this Report and Order based on the standards we have implemented for the rebanding transition period in the 800 MHz band. Specifically, all licensees operating in the 900 MHz B/ILT frequencies are entitled to interference protection for portable/hand-held units with a minimum median desired signal strength of -85 dBm and for mobile/vehicular units with a minimum median desired signal strength of -88 dBm. Similar to the Commission's observation in the context of 800 MHz rebanding, we conclude that these values likewise are "within the range of reason" for providing meaningful interference protection for all licensees operating on 900 MHz B/ILT frequencies.<sup>108</sup> We further adopt a revision to section 90.672 of the Commission's rules that provides that unacceptable interference will be deemed to occur to operations in the 900 MHz B/ILT band where, assuming all other conditions as provided in the amended rule section are met, a voice transceiver is receiving an undesired signal or signals that cause the measured Carrier to Noise plus Interference (C/(I+N)) ratio of the transceiver's received to be less than 17 dB. As with the median desired signal, the value we are adopting for this ratio is consistent with the value that is applicable to the 800 MHz band during the rebanding transition. Finally, we adopt the proposal put forth by the Joint Commenters for establishing minimum receiver standards for mobile and portable units used in the 900 MHz B/ILT band: 60 dB intermodulation rejection ratio; 60 dB adjacent channel rejection; and -116 dBm reference sensitivity. These minimum receiver standards are part of the package of rule provisions designed to guard against unacceptable interference in the 900 MHz B/ILT band.<sup>109</sup>

25. We are not persuaded that the -101/-104 dBm interference protection standard offered by the Joint Commenters is appropriate at this time. The levels we adopt in this Report and Order represent

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<sup>104</sup> *Id.* at 25139 ¶ 41.

<sup>105</sup> See Nextel May 4 *Ex Parte* Letter at 1.

<sup>106</sup> 800 MHz R&O, 19 FCC Rcd at 15127-28 ¶ 337.

<sup>107</sup> See *Ex Parte* Letter from Jill M. Lyon, Vice President & General Counsel, Utilities Telecom Council, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed May 24, 2007) at 2.

<sup>108</sup> See 800 MHz *Supplemental R&O*, 19 FCC Rcd at 25139 ¶ 41.

<sup>109</sup> It is our understanding that these standards were developed in conjunction with leading manufacturers of radio equipment used in the 900 MHz B/ILT band. The standards we adopt in this proceeding are less stringent than those imposed in the 800 MHz band.

a reasonable balance between the recommendations for a more stringent interference protection standard offered by the Joint Commenters and Nextel's position that no additional interference protection requirements are warranted beyond those already contained in the Commission's rules. These rule amendments recognize that the 800 MHz rebanding transition period — when technically different systems are spectrally interleaved — may provide more comparable guidance for establishing interference standards in the 900 MHz B/ILT band than the post-rebanding 800 MHz environment when different uses will be spectrally separated. In addition, Nextel indicates that, to date, there has only been one reported case of interference in the 900 MHz B/ILT band from a CMRS licensee (not Nextel) to a B/ILT licensee.<sup>110</sup> Based on the record in this proceeding, we anticipate that the standards we adopt here will provide interference-free communication for all licensees operating in 900 MHz B/ILT spectrum. Nevertheless, should we be presented in the future with data indicating that harmful interference in the 900 MHz B/ILT band is occurring under these standards, we will not hesitate to revisit this issue.

26. As noted above, the Joint Commenters urged the Commission to apply to the 900 MHz B/ILT band the same interference resolution procedures specified in section 90.674 of the rules<sup>111</sup> for the 800 MHz band, specifically including the establishment of a common electronic notification system for interference occurring at 900 MHz.<sup>112</sup> We decline at this time to mandate establishment and operation of such a system for the 900 MHz B/ILT band, given the fact that licensees operating in this band are not currently experiencing significant levels of harmful interference. It is apparent from the filings made by the Joint Commenters and EWA that 900 MHz B/ILT licensees and their representatives are interested in and are in a position, if they so choose, to establish an electronic notification system without a Commission mandate.<sup>113</sup> Such a system can be established as an industry-driven tool. Moreover, operation in the 900 MHz B/ILT band requires frequency coordination, and these coordinators — like UTC and EWA — have a significant role to play in minimizing and preventing unacceptable interference.<sup>114</sup> While we do not mandate adoption of such a process, we do encourage 900 MHz B/ILT licensees and their representatives to establish an electronic notification system in the event they consider such a step to be an appropriate method for addressing any future unacceptable interference.<sup>115</sup>

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<sup>110</sup> See Nextel May 4 *Ex Parte* Letter at 2.

<sup>111</sup> 47 C.F.R. § 90.674.

<sup>112</sup> See Attachment to Joint Commenters April 13 *Ex Parte* Letter. In the *800 MHz R&O*, the Commission required that 800 MHz cellular licensees establish a common electronic means of receiving initial notification of interference complaints from non-cellular licensees. See *800 MHz R&O*, 19 FCC Rcd at 15042 ¶ 133; 47 C.F.R. § 90.674(a)(2). The Joint Commenters proposed to take part in that system until such time as the 900 MHz land mobile user community could develop and maintain a notification system dedicated to 900 MHz.

<sup>113</sup> See EWA May 14 *Ex Parte* Letter at 4; Attachment to Joint Commenters April 13 *Ex Parte* Letter.

<sup>114</sup> See 47 C.F.R. § 90.175; see also In the Matter of Frequency Coordination in the Private Land Mobile Radio Services, *Report and Order*, 103 FCC 2d 1093 (1986).

<sup>115</sup> The action that we take in this Report and Order regarding interference protection standards and abatement procedures also resolves the petitions for reconsideration filed by AAR, NAM/MRFAC, and Exelon Corporation in WT Docket No. 02-55 regarding the appropriate interference standards to be applied to the 900 MHz B/ILT bands. See note 78 *supra*.

### C. Lifting the Freeze Placed on Applications for New 900 MHz B/ILT Licenses

27. As discussed above, the Bureau imposed a freeze on the acceptance of applications for new 900 MHz B/ILT licenses in September 2004, and the Commission affirmed that freeze<sup>116</sup> Because we are now concluding WT Docket 05-62, and in light of the actions we are taking in this Report and Order, we will lift the freeze placed on the filing of applications for new 900 MHz B/ILT authorizations. Specifically, the freeze will be lifted in a NPSPAC region six months after rebanding is complete in that particular NPSPAC region.<sup>117</sup>

28. We believe that this approach best balances the demands for 900 MHz B/ILT spectrum, including the ongoing needs of Nextel for access to this spectrum to support its rebanding efforts. As noted previously, the Commission has granted STAs to Nextel to operate temporarily on 900 MHz B/ILT spectrum in 101 markets in order to provide “green space” necessary to enable the relocation of 800 MHz incumbents during the reconfiguration of this band.<sup>118</sup> We are concerned that lifting the 900 MHz B/ILT application freeze in its entirety at this time could jeopardize Nextel’s 800 MHz rebanding efforts. Accordingly, we will not lift the freeze in a particular NPSPAC region until six months after the date that rebanding is completed in that particular region. We believe that this timeframe will provide Nextel a reasonable opportunity to relocate its facilities off the 900 MHz B/ILT frequencies it is now using under special temporary authority.

29. We note that, at this time, rebanding has not yet been completed in any NPSPAC region.<sup>119</sup> In order to avoid any confusion regarding the date when the 900 MHz B/ILT application freeze is lifted in any particular NPSPAC region, we direct the Bureau, in coordination with the Public Safety and Homeland Security Bureau, to provide public notice as to when the freeze will end within 60 days of rebanding being completed within a specific NPSPAC region.<sup>120</sup>

30. In addition, we note there may be situations in which an applicant seeks a 900 MHz B/ILT authorization for spectrum in a NPSPAC region where the freeze has been lifted that could extend the applicant’s service contour into an adjacent NPSPAC region where the freeze has not been lifted. In such a case, the applicant may file a waiver request to allow its coverage to extend into the NPSPAC

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<sup>116</sup> See paras. 4-5 *supra*.

<sup>117</sup> A map showing the NPSPAC regions is available at <http://www.fcc.gov/pshs/spectrum/800mhz/regional-map.html>. Retuning in each of the 55 NPSPAC regions is on a region-by-region basis; the sequence of region reconfiguration completion, as determined by the 800 MHz Transition Administrator, depends on, *inter alia*, degree of reported interference, population, border-region status, and impact on adjacent regions.

<sup>118</sup> See para. 14 and note 65 *supra*.

<sup>119</sup> Although the 36-month period originally established for rebanding ended on June 26, 2008, the Public Safety and Homeland Security Bureau has granted waivers of the deadline to approximately 500 public safety licensees that have requested more time to complete the rebanding process. See Improving Public Safety Communications in the 800 MHz Band, WT Docket 02-55, *Order*, 23 FCC Rcd 9421 (PSHSB 2008); *Order*, 23 FCC Rcd 9430 (PSHSB 2008); *Order*, 23 FCC Rcd 9443 (PSHSB 2008); *Order*, 23 FCC Rcd 9454 (PSHSB 2008); *Order*, 23 FCC Rcd 9464 (PSHSB 2008); *Order*, 23 FCC Rcd 9476 (PSHSB 2008); *Order*, 23 FCC Rcd 9485 (PSHSB 2008); *Order*, 23 FCC Rcd 9491 (PSHSB 2008); *Order*, 23 FCC Rcd 10911 (PSHSB 2008). See also *id.*, *Order*, 23 FCC Rcd 9558 (PSHSB 2008) (granting Sprint Nextel’s request to remain temporarily on certain 800 MHz channels not required by rebanding public safety licensees until after the June 26, 2008, deadline for completion of 800 MHz rebanding).

<sup>120</sup> The completion of 800 MHz rebanding in each NPSPAC region will be announced by public notice. 800 MHz MO&O, 20 FCC Rcd at 16055 ¶ 92.

region in which the freeze remains in effect, provided the overlapping coverage area is limited and would not disrupt Nextel's rebanding efforts in the region. Further, we remind potential 900 MHz B/ILT applicants that, under the applicable rules, co-channel frequency usage in a NPSPAC region where the freeze has not yet been lifted may limit the geographic area in which applications can be permissibly filed in a NPSPAC region where the freeze is no longer in effect.

31. We advise potential applicants that, upon lifting the freeze in each NPSPAC region, we will be particularly vigilant in assessing an applicant's basic minimum qualifications to hold a 900 MHz B/ILT license and in monitoring the filing of applications for new authorizations in this band. We undertake this scrutiny in order to avoid re-creating the situation that necessitated the imposition of a freeze on the filing of applications for new 900 MHz B/ILT authorizations in the first place. Should we ascertain abuse in the application process, we will not hesitate to take appropriate enforcement or other remedial action.

#### **IV. CONCLUSION**

32. In this Report and Order, we decide to retain site-based licensing for the 900 MHz B/ILT band. This action will help ensure the continued viability of 900 MHz B/ILT communications operations, which play an essential role in emergencies, critical infrastructure operations, homeland security, and the U.S. economy. At the same time, Nextel will retain a number of mechanisms to access 900 MHz B/ILT spectrum to be used as "green space" during the course of the 800 MHz rebanding process. Further, we have adopted interference standards that will help to facilitate interference-free operation in this band and accommodate the range of licensees operating in this band. Finally, we lift the freeze on the filing of applications for new 900 MHz B/ILT licenses in each 800 MHz NPSPAC region six months after 800 MHz rebanding is completed in that region. We believe that our actions in this proceeding achieve a balance of competing interests that will best serve the needs of the public.

#### **V. PROCEDURAL MATTERS**

##### **A. Final Regulatory Flexibility Analysis**

33. As required by the Regulatory Flexibility Act of 1980 (RFA),<sup>121</sup> the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the possible significant economic impact on small entities of the policies and rules adopted in this Report and Order. The analysis is found in Appendix C. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this Report and Order, including the FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

##### **B. Congressional Review Act**

34. The Commission will send a copy of this Report and Order to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

##### **C. Paperwork Reduction Act of 1995 Analysis**

35. This document does not contain new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified "information collection burden for small business concerns with

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<sup>121</sup> 5 U.S.C. § 604.



fewer than 25 employees,” pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4).

**D. Accessible Formats**

36. Accessible formats of this Report and Order (Braille, large print, electronic files, audio format), are available to persons with disabilities by sending an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or by calling the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY). This Report and Order can also be downloaded at <http://www.fcc.gov>.

**VI. ORDERING CLAUSES**

37. Accordingly, IT IS ORDERED, pursuant to sections 1, 4(i), 303, 309, 316, and 332 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 303, 309, 316, and 332, that this Report and Order IS hereby ADOPTED.

38. IT IS FURTHER ORDERED that Part 90 of the Commission’s rules IS AMENDED as set forth in Appendix B and that these rules shall be effective [30 days after publication in the Federal Register].

39. IT IS FURTHER ORDERED that the Petitions for Reconsideration filed by the Association of American Railroads on December 17, 2004, by the National Association of Manufacturers and MRFAC, Inc. on December 22, 2004, and by Exelon Corporation on December 22, 2004, in WT Docket No. 02-55 *et al.* ARE GRANTED to the extent described herein.

40. IT IS FURTHER ORDERED that the freeze placed on applications for new 900 MHz Business/Industrial Land Transportation licenses by Public Notice, September 17, 2004, IS HEREBY LIFTED, at such time and under the conditions set forth in this Report and Order.

41. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

**APPENDIX A****List of Commenting Parties****Comments:**

1. Aeronautical Radio, Inc. ("ARINC")
2. Association of American Railroads ("AAR")
3. Association of American Railroads, American Petroleum Institute, MRFAC, Inc., National Association of Manufacturers, United Telecom Council ("Joint Commenters")
4. BellSouth Corporation and BellSouth Telecommunications, Inc. ("BellSouth")
5. Blooston, Mordkofsky, Dickens, Duffy & Prendergast (on behalf of Automobile Club of Southern California, California State Automobile Association, and Telecris Biotherapeutics, Inc.) ("Blooston")
6. Cleco Corporation
7. Electrocom, Inc. ("Electrocom")
8. Florida Power & Light Company ("FPL")
9. Kenwood USA Corporation
10. M/A-COM, Inc. ("M/A-COM")
11. National Public Safety Telecommunications Council ("NPSTC")
12. National Rural Electric Cooperative Association (late-filed)
13. Nextel Communications, Inc. ("Nextel")
14. PCIA - The Wireless Infrastructure Association ("PCIA")
15. Progeny LMS, LLC
16. Public Service Electric and Gas (PSEG) Company, PSEG Power LLC (PSEG Power), PSEG Energy Resources & Trade LLC (PSEG ER&T), and PSEG Services Corporation (PSEG Services) ("PSEG")
17. Railway Assoc. of Canada, Canadian National Railway, and Canadian Pacific Railway ("Canadian Railway Interests")
18. South Carolina Public Service Authority ("South Carolina")
19. Southern Communications Services, Inc. d/b/a SouthernLINC Wireless ("SouthernLINC")
20. United Parcel Service, Inc. ("UPS")

**Reply Comments:**

1. Blooston
2. Enterprise Wireless Alliance ("EWA")
3. FPL
4. Monroe County, NY ("Monroe County") (late-filed)
5. Motorola, Inc. ("Motorola")
6. Nextel
7. Northern Indiana Public Service Company ("NIPSCO")
8. PCIA
9. PSEG Companies
10. SouthernLINC

**Ex parte Submissions:**

1. American Association of Paging Carriers
2. American Petroleum Institute
3. Coors Brewing Co.
4. Critical Response Systems
5. EWA
6. FPL
7. Joint Commenters
8. Monroe County, New York Department of Public Safety
9. National Association of Manufacturers
10. NPSTC
11. Nextel
12. Utilities Telecom Council (“UTC”)

## APPENDIX B

## Final Rules

## PART 90 – PRIVATE LAND MOBILE RADIO SERVICES

1. The authority citation for Part 90 continues to read as follows:

Authority: Sections 4(i), 11, 303(g), 303(r), and 302(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7).

2. Amend § 90.672 to read as follows:

**§ 90.672 Unacceptable interference to non-cellular 800 MHz licensees from 800 MHz cellular systems or Part 22 Cellular Radiotelephone systems, and within the 900 MHz Business/Industrial Land Transportation Pool.**

(a) Definition. Except as provided in 47 CFR 90.617(k), unacceptable interference to non-cellular licensees in the 800 MHz band from 800 MHz cellular systems or part 22 of this chapter, Cellular Radiotelephone systems and within the 900 MHz Business/Industrial Land Transportation (B/ILT) Pool will be deemed to occur when the below conditions are met:

\* \* \* \* \*

(1) \* \* \*

(A) A median desired signal strength of -104 dBm or higher if operating in the 800 MHz band, or a median desired signal strength of -88 dBm if operating in the 900 MHz B/ILT Pool, as measured at the R.F. input of the receiver of a mobile unit; or

(B) A median desired signal strength of -101 dBm or higher if operating in the 800 MHz band, or a median desired signal strength of -85 dBm if operating in the 900 MHz B/ILT Pool, as measured at the R.F. input of the receiver of a portable i.e., hand-held unit; and either

\* \* \* \* \*

(ii) \* \* \* \* \*

(B) Receiving an undesired signal or signals which cause the measured Carrier to Noise plus Interference ( $C/(I+N)$ ) ratio of the receiver section of said transceiver to be less than 20 dB if operating in the 800 MHz band, or less than 17 dB if operating in the 900 MHz B/ILT Pool, or;

\* \* \* \* \*

(b) Minimum Receiver Requirements. Voice transceivers capable of operating in the 806–824 MHz portion of the 800 MHz band, or in the 900 MHz Business/Industrial Land Transportation Pool, shall have the following minimum performance specifications in order for the system in which such transceivers are used to claim entitlement to full protection against unacceptable interference. (See paragraph (a)(2) of this section.)

\* \* \* \* \*

(3) Voice units intended for mobile or portable use in the 900 MHz Business/Industrial Land Transportation Pool: 60 dB intermodulation rejection ratio; 60 dB adjacent channel rejection ratio; -116 dBm reference sensitivity.



## APPENDIX C

## Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the Notice of Proposed Rulemaking (*Notice*).<sup>2</sup> The Commission sought written public comment on the proposals in the *Notice*, including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.<sup>3</sup>

**A. Need for, and Objectives of, the Rules**

2. In this *Report and Order*, the Commission takes three actions: first, it retains the current site-based licensing paradigm for the 199 channels allocated to the Business and Industrial Land Transportation (B/ILT Pool) in the 896-901/935-940 MHz (900 MHz) band<sup>4</sup> (900 MHz B/ILT Pool) and declines to adopt competitive bidding rules or geographic service areas for the 900 MHz B/ILT “white space;” second, it amends Part 90 of the Commission’s Rules to establish interference protection rules for licensees operating in the 900 MHz B/ILT Pool; and third, it lifts, on a rolling basis, the freeze on applications for new licenses in the 900 MHz B/ILT Pool.

3. Regarding retention of the current site-based licensing paradigm, the spectrum allotted to 900 MHz B/ILT licensees is one of the few remaining area where such licensees can obtain spectrum essential to their safe and efficient operation; transitioning to geographic area licensing could in many cases frustrate normal B/ILT system growth. Traditional B/ILT licensees have a vital communications role in safeguarding critical infrastructure (CI) industries, including such varied and critical industries as utilities, land transportation, manufacturers/industry, and petro-chemical. Finally, an important rationale for originally proposing to adopt geographic service areas and competitive bidding processes was to facilitate rebanding at 800 MHz by allowing Sprint Nextel to relocate to spectrally-similar 900 MHz B/ILT spectrum. Through a combination of acquisition of site-based licenses, special temporary authorizations, and spectrum leasing at 900 MHz, Sprint Nextel appears to have acquired sufficient spectrum at 900 MHz to allow it to proceed with the 800 MHz rebanding, and the Commission concludes that geographic licensing and competitive bidding rules are not now essential to the success of 800 MHz rebanding.

4. Regarding amending Part 90 of the Commission’s rules to establish interference protection standards, the environment at 900 MHz is similar to the spectrally interleaved environment that exists today at 800 MHz during the current rebanding transition period. In the 800 MHz Supplemental Report and Order, WT Docket No. 02-55, the Commission adopted an “interim”

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601–612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> See Amendment of Part 90 of the Commission’s Rules to Provide for Flexible Use of the 896-901 MHz and 935-940 MHz Bands Allotted to the Business and Industrial Land Transportation Pool, WT Docket No. 05-62; Oppositions and Petitions for Reconsideration of the 900 MHz Band Freeze Notice, DA 04-3013, *Notice of Proposed Rulemaking and Memorandum Opinion and Order*, 20 FCC Rcd 3814, 3848 (2005).

<sup>3</sup> See 5 U.S.C. § 604.

<sup>4</sup> 47 C.F.R. § 90.617(b), Table 2B – Industrial/Land Transportation Category 896-901/935-940 MHz Band Channels (99 Channels); § 90.617(c), Table 3B – Business Category 896-901/935-940 MHz Band Channels (100 Channels) (2003).

interference protection standard that cellular licensees need to afford non-cellularized systems prior to the completion of rebanding. Because the 900 MHz band has and will continue to include systems employing different technologies and with different operational characteristics that are spectrally interleaved, the 800 MHz “interim” environment is sufficiently similar to the 900 MHz spectrum environment that the rules the Commission adopted for use during the 800 MHz rebanding transition are appropriate for the 900 MHz B/ILT spectrum.

5. Regarding lifting the freeze on applications for new licenses in the 900 MHz B/ILT Pool, the freeze placed on applications for new 900 MHz B/ILT licenses in September 2004 will be lifted on a rolling basis, tied to the completion of rebanding in each 800 MHz National Public Safety Planning Advisory Committee (NPSPAC) region. Specifically, the freeze will be lifted in a NPSPAC region six months after rebanding is complete in that particular NPSPAC region. The Commission will provide notice to the public regarding the date on which the freeze will be lifted in each NPSPAC region after rebanding concludes in that region. Accepting applications for new authorizations on a rolling basis best balances the demands for 900 MHz B/ILT spectrum, including the ongoing needs of Sprint Nextel for access to this spectrum to support its rebanding efforts. Lifting the freeze on a rolling basis, with a six-month “grace period,” will provide Sprint Nextel a reasonable opportunity to relocate its facilities off the 900 MHz B/ILT frequencies it is now using under special temporary authority.

#### **B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA**

6. No comments or reply comments were filed in direct response to the IRFA.

#### **C. Description and Estimate of the Number of Small Entities To Which the Rules Will Apply**

7. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.<sup>5</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>6</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>7</sup> A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.<sup>8</sup>

8. Small Businesses. Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.<sup>9</sup>

9. Small Organizations. Nationwide, there are approximately 1.6 million small organizations.<sup>10</sup>

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<sup>5</sup> 5 U.S.C. § 603(b)(3).

<sup>6</sup> 5 U.S.C. § 601(6).

<sup>7</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

<sup>8</sup> 15 U.S.C. § 632.

<sup>9</sup> See SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

<sup>10</sup> Independent Sector, The New Nonprofit Almanac & Desk Reference (2002).

10. *Small Governmental Jurisdictions.* The term “small governmental jurisdiction” is defined as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”<sup>11</sup> As of 2002, there were approximately 87,525 governmental jurisdictions in the United States.<sup>12</sup> This number includes 38,967 county governments, municipalities, and townships, of which 37,373 (approximately 95.9%) have populations of fewer than 50,000, and of which 1,594 have populations of 50,000 or more. Thus, we estimate the number of small governmental jurisdictions overall to be 85,931 or fewer. In completing this FRFA, we recognize that small governmental jurisdictions are, in fact, likely to be 900 MHz B/ILT licensees.

11. *Wireless Telecommunications Carriers.* The SBA has developed a small business size standard for wireless firms within the broad economic census category of “Wireless Telecommunications Carriers (except Satellite)”<sup>13</sup> Under this category, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. For the census category of wireless telecommunications carrier, Census Bureau data for 2002<sup>14</sup> show that there were 11,156 firms in this category that operated for the entire year.<sup>15</sup> Of this, 9,770 had fewer than 100 (one hundred) employees.<sup>16</sup> Thus, under this category and size standard, the great majority of firms can be considered small.

12. Licensees in the 900 MHz B/ILT band generally fall into one of two categories: wireless telecommunications carrier (except satellite) that provide service to other parties, and entities that use the spectrum solely for internal purposes, not to provide telecommunications services to other, but rather to support their primary operations. The first category of licensees, those that provide telecommunications service to others, are typically incumbent B/ILT licensees that have either converted their operations to commercial use, as is allowed under Commission rules, or assigned their licenses to a commercial operator for commercial use. Others in this category include commercial entities operating in this band under special temporary authority, or through a leasing arrangement with an incumbent B/ILT licensee. In the second category are more traditional B/ILT licensees, “traditional” in that provision of telecommunications services is not their primary operation. Rather, these licensees hold authorizations to operate in the 900 MHz B/ILT only to the extent that holding such authorizations, and providing

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<sup>11</sup> 5 U.S.C. § 601(5).

<sup>12</sup> U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, pages 272-273, Tables 415 and 417.

<sup>13</sup> 13 C.F.R. § 121.201, NAICS code 517210.

<sup>14</sup> We note that 2007 Economic Census forms were sent to more than four million businesses in December 2007, asking for information about business activity during calendar 2007. The U.S. Census Bureau expects the results of the information request to be made available in 2009 or 2010. See “Economic Census,” <http://www.census.gov/econ/census02/>. For purposes of completing this FRFA, we note that the data we use is from 2002. We note further that, in the absence of more recent and complete data, we continue to use statistics from 2002.

<sup>15</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 2, NAICS code 51721 (issued November 2005). Prior to March 2008, the Commission used two NAICS code (517211/Paging and 517212/Cellular and other wireless telecommunications) when completed wireless-related FRFAs. The March 2008 amendment appears to combine “paging” and “cellular and other wireless telecommunications” into the larger, single category of “Wireless telecommunications carriers (except satellite).” In the 2005 Census economic report cited above, this single category is cited as “51721.” The March 2008 amendment cites it as “517210.”

<sup>16</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 2, NAICS code 51721 (issued November 2005).

communication, further their primary operations. Examples include public utilities, small, mid-size, and large manufacturers, parcel delivery companies, etc.

13. *Estimates for Private Land Mobile Radio (PLMR) Licensees, including 900 MHz B/ILT Licensees.* As a preliminary matter, we note that 900 MHz B/ILT licensees fall under the SBA designation of wireless telecommunications carriers (except satellite). Private land mobile radio systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories. Because of the vast array of PLMR users, the Commission has not developed a definition of small entities specifically applicable to PLMR users, nor has the SBA developed so specific a definition. As noted above,<sup>17</sup> under this category and size standard, the great majority of firms can be considered small. For the purpose of determining whether a licensee is a small business as defined by the SBA, each licensee would need to be evaluated within its own business area. The Commission's fiscal year 1994 annual report indicates that, at the end of fiscal year 1994, there were 1,101,711 licensees operating 12,882,623 transmitters in the PLMR bands below 512 MHz.<sup>18</sup> For purposes of FRFA analysis, we assume the vast majority of all PLMR licensees are small.

14. The Commission has determined that there are approximately 1,000 licensees in the 896-901 MHz and 935-940 MHz B/ILT MHz bands, as of October 9, 2008; the Commission does not know how many licensees in these bands are small entities, as the Commission does not collect that information for these types of entities. The Commission notes that, under the action it takes in this Order, entities, including small businesses, may resume filing for authorizations in this service. The Commission does not know how many entities that will file for authorization will be small entities. Thus, the Commission assumes, for purposes of this FRFA, that all prospective licensees are small entities as that term is defined by the SBA or by our proposed small business definitions for these bands.

#### **D. Description of Projected Reporting, Recordkeeping, and other Compliance Requirements**

15. There are no new reporting or recordkeeping requirements adopted in this *Report and Order* that impose new compliance requirements on affected entities.

#### **E. Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

16. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof for small entities.<sup>19</sup>

17. Regarding retention of the current site-based licensing formula, the Commission considered adopting competitive bidding rules and geographic-area licensing, but found that the adverse effects of changing the licensing system on all current and future licensees in this service, and particularly including small businesses, were too great. The Commission is in particular concerned that traditional 900 MHz B/ILT licensees, whose primary business is something other than provision of

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<sup>17</sup> See *supra* paragraph 11.

<sup>18</sup> See Federal Communications Commission, 60th Annual Report, Fiscal Year 1994 at 120-121.

<sup>19</sup> 5 U.S.C. § 603(c).

communications services, would have to acquire far more spectrum at auction than they would need, causing the type of spectrum hoarding and warehousing the Commission has worked against. The Commission therefore decided to retain the current licensing system.

18. Regarding amending Part 90 of the Commission's rules to account for, and limit harmful interference within, the interleaved environment of the 900 MHz B/ILT spectrum, the Commission considered three options: to adopt the same rules as will be applied in the post-rebanded 800 MHz environment; to retain the current 900 MHz B/ILT interference protection rules; and to adopt the rules currently in effect at 800 MHz during the rebanding transition period. The first option could have been too burdensome for Sprint Nextel and possibly other 900 MHz B/ILT licensees; complying with 800 MHz-type interference protection would have been so costly as to prevent Sprint Nextel from even considering use of the 900 MHz B/ILT band. The second option, based as it is on the assumption of little interference, may not provide sufficient protection for a number of 900 MHz B/ILT licensees from powerful commercial carrier such as Sprint Nextel, which in turn would impede their (*i.e.*, incumbent and "traditional" 900 MHz B/ILT licensees) ability to operate effectively. Adversely affected entities under either option could include small businesses. The Commission adopted the third option as an appropriate balancing of burdens and achievement of suitable interference protection. The Commission has acknowledged that the interference protection standard adopted here is the most appropriate for all parties for an interleaved spectral environment such as the 900 MHz B/ILT band.

19. In the Commission's view, establishing a generally-applicable interference protection standard for the 900 MHz B/ILT Pool will effectively eliminate costs that all licensees, including small entities, would incur to resolve an interference complaint. The Commission believes that any up-front costs associated with initial compliance with the amended rule outweigh the costs associated with addressing and resolving an interference issue. Finally, the Commission believes that among the alternative rules proposed in the *Notice*, the one it adopts in this *Report and Order* (*i.e.*, holding all 900 MHz B/ILT Pool licensees to the same interference protection rights and obligations, as opposed to adopting two or more interference protection standards) is the least onerous to, and most effective for, all parties, including small entities, in that adopting a generally-applicable standard puts all licensees in an equal position.

20. Regarding lifting the freeze placed on applications for new authorizations for 900 MHz B/ILT licenses, with adoption of the Report and Order, there is no compelling reason to maintain the freeze; the Commission's action will only benefit small businesses, as it will allow them to apply for new or additional 900 MHz B/ILT spectrum.

**Report to Congress:** The Commission will send a copy of the *Report and Order*, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act.<sup>20</sup> In addition, the Commission will send a copy of the *Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register.<sup>21</sup>

IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

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<sup>20</sup> See 5 U.S.C. § 801(a)(1)(A).

<sup>21</sup> See 5 U.S.C. § 604(b).